Official

LIEUTENANT LEIGH WADE.

WORLD FLIER, WILL TALK

TO AERO SOCIETY TODAY

Undergraduate News Organ of Technology

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CAMBRIDGE, MASS., FRIDAY, FEBRUARY 6, 1925

Five Cents

# **KETTERING SPEAKS** AT ALDRED LECTURE ON RESEARCH WORK

Claims That Scientific Fellow Tends to Superanalyse His Problems

"WORK AND KEEP HOPING"

#### Explains Factors Responsible For Faulty Machinery and Apparatus

"A research laboratory is a place where you have to train individual minds to comprehensive problems," stated C. F. Kettering, head of the General Motors Research Corporation, ture to Seniors and Graduates in room 10-250.

There are two methods of approaching a problem in a research laboratory, according to Dr. Kettering. The problem is first submitted to the technical man who analyzes it in a scientific manner, obtaining all his data in the most accurate manner possible. It is then turned over to the ordinary factory worker who tackles the problem as he sees fit, without the use of technical knowledge. Quite often, the unscientific worker stumbles upon the correct solution, but it is usually the technical man who places the stumbling block in

his path.
"The scientific fellow is likely to superanalyze the problem," said the speaker in contrasting the work of the scientific and non-scientific men. The chief difficulty encountered in training men in research work is that of making them settle down and stop trying to change the problem. Some men approach the subject by first reading up everything that has been written on the matter and then trying to apply this information to a new problem. The

Continued on Page 4

# DORMS' FIRST FORMAL DANCE THIS EVENING

#### Nightingales Nine-piece Band To Render a Program Of Fourteen Dances

first time this year in Walker Memorial given this evening in the main hall. The given this evening in the main hall. The program of dances will last from 8.30

The location of the polls has not yet the General Electric Company. until 1 o'clock, with music by the Nightingales nine piece orchestra. Admission at the door will be \$4.00 per couple to accommodate those who have not already purchased their tickets. The affair is the first formal dance which the committee in charge of dormitory dances has attempted this season. The program will consist of fourteen dances. Refreshments will be served as usual during the intermission with the addition of favors which will be distributed as announced at the same time to both ladies and gentlemen.

K. E. Smith '27 is in charge of the

affair and all arrangements regarding the dance. Mrs. H. M. Goodwin, E Miller '26. Mrs. H. M. Goodwin, Mrs. A. D. Little, and Mrs. Winward Prescott have consented to act as patronesses this evening.

#### EFFECTS OF HARMONICS ON MOTORS DISCUSSED

Harmonics, their effects on torque curves, and how to avoid and produce them were discussed by P. L. Alger of the General Electric Company in a lecture on "The Effects of Harmonics in the Operation of Induction Motors," given in room 4-231 on Wednesday at 4. The lecture was illustrated by slides, 1912. Corona is the luminous discharge different types of torque curves being from high voltage transmission lines. due to harmonics were explained and the voltage and the frequency of the Mr. Alger spoke of several ways of producing harmonics as by split cores and varied windings. He gave In his talk he dealt with the nature and varied windings. He gave In his talk he dealt with the nature a number of methods used in reducing of lightning and with the means of the third harmonic.

A practical application of the effects of harmonics on motors was given in the design of an induction motor which takes advantage of harmonics to act

as a synchronous motor. The next two lectures in this series

#### Three Students Sent To Jail-Later Freed

Three Technology students were sent to jail at 3 o'clock last Mon-day, but were released an hour later, since no charge was booked against them. They were not arrested for rousing the ire of the Cambridge police by traversing the perilous passage of the Charles, but were merely performing a Christian charity by teaching the uneducated prisoners of the jail the three R's.

Another Technology student will be enabled to endear himself to the hearts of these unfortunates if he will report to the T. C. A. office this week, as one more teacher is needed. He will teach preliminary English and Mathematics, and anyone who has successfully passed the first term of the first year is perfectly capable of handling this work. One may also report to W. F. Blake, '27; or H. H. Taylor '25. The three students now engaged in the art are Austin Cole, Jr., '25, R. J. Hochstetler '25, and H. R. Arf '28.

# **NOMINATIONS FOR** MARSHALS NOW DUE

Election of Senior Class Day Marshals and Committee Comes Wednesday

Between the hours of nine this mornng and one tomorrow, all nominations for Senior Class Day Marshals and the Senior Week Committee, must be turned in at the Information Office, room 10-100. The election will be held next Wednesday.

Nomination papers for candidates for the committee must have the signatures of five sponsors, and those for marshal require 25 signatures. Twenty-five committeemen are to be elected, and three marshals. Marshals are not necessarily members of the committee. If

After the election, the newly-elected members of the Senior Week Committee will choose one of their number for committee chairman. The position o

do hereby nominate-

to secure a more advantageous polling place than the lounge in Building 5 since it believes that the rather isotor in keeping down the percentage of the Junior Class that voted in the recent Prom Elections.

# HALF OF SENIORS **SECURE POSITIONS BY SPRING RECESS**

Professor Miller Speaker At Lecture to Freshmen Yesterday

MORE JOBS THAN MEN

Engineering Feats of Coming Century Would Read As Fiction Now"

"Fifty per cent of the graduating class will have received offers before unior week," said Professor E. F. Miller in his lecture to the freshmen yesterday, the fourth of the series of talks being given to the first year men.

Professor Miller began with a deshas been made in science during the last century, and of the great progress accomplished during our lifetime, ad ding that the engineering feats of the coming century would seem like fiction it we could read of them now. He on the way in which the courses are related, concluding his speech with a comparison of the chances for employment on graduating from different branches of engineering.

Opportunities Ahead
Sanitary Engineering course. then based the major part of his time on the way in which the courses are

Sanitary Engineering, course XI, is similar to Civil Engineering, with biolo gy, bacteriology and chemistry added Mechanical Engineering has four op tions besides the regular course. The recently developed course in Automotive Engineering, Engine Design, Textile Engineering, and Refrigeration Architectural Engineering, calls for a wide range of ability. In forty-story buildings there are power plants, refrigerating plants, laundries, elevator pumps, electrical machinery, a water distribution system, heating and ventilating systems pumps for elevating a man runs for both marshal and the committee, he must submit two nomination papers, one for each position. el of the street sewers. General Engineering IX-B is mostly mechanica engineering the second and third years. The fourth year fifty per cent of the

duction work and later to administra- Ted Weems of Philadelphia, which has tive work. I recall that one of the made many phonograph records for the Tuxedos will be the vogue for the of the class." Following the signature graduates of this course is responsible Victor Company, and which is playing of the sponsors, the statement, "I here- for very marked improvements made at this year's Dartmouth Prom. at the Formal Dormitory Dance to be by accept the nomination," must be in the sixty thousand K. V. A. turbine and generator recently constructed by been chosen by the Election Committee at the graduate was two years out of college to 5 o'clock on that day, signups will anced organization. In order to elimitee. The committee hopes to be able at the time. I might incidentally rebe sold to Juniors; on March 3 at the nate this discrepancy, the clubs are now to secure a more advantageous polling mark that this graduate was two years out of college to 5 o'clock on that day, signups will anced organization. In order to eliminate this discrepancy, the clubs are now

> "Every teacher here will go out of lated position of the lounge was a fac- his way to help a man who wants to

> > (Continued on page 4)

**VOO DOO DINNER HELD** 

WEDNESDAY AT LOUIS'

Phosphorus entertained over 50 peo-

ple at the annual banquet of Technolo-

gy's humorous publication on Wednes

day evening in Louis' French Restau-

rant. Short talks, all in the lighter vein, were given by C. F. Lyman of the English Department, O. B. Denison '11, and W. D. Rowe '24, General Manager of Voo Doo last year, and by F. H. Riegel '25, A. W. K. Billings '25. C. F. Billman '25 and B. P. Lambert '26, cription of the remarkable advance that all of this year's Managing Board. Entertainment was furnished by six girls who danced and sang, and O. B. Denison '11, who played the piano and sang several of the old favorites to his own

accompaniment.

# TICKETS FOR PROM TWELVE DOLLARS

Attendance Limited to 400 Couples to Avoid Crowded Conditions

Twelve dollars will be the price of ickets to the Junior Pront this year, payable in two instalments of six dollais each. The higher price this year is due to the fact that the attendance is to be limited to 400 couples, in order to prevent the crowded conditions which have obtained in previous years. The orchestra to play at the Prom

has not yet been chosen, but the numat this year's Dartmouth Prom.

Poster Competition Open

mark that this graduate was a young same time, to Seniors; and on March lady.' one signup will be sold to a man, unless he gives the names of the other men who wish them. Signups will be redeemed on March 30 and 31, and on April 1. Stag tickets this year will be six dollars, and tickets for chaperones will cost four dollars.

Competition for the prize offered for the best poster submitted for the publicity of the Clubs is now open. In order to be considered for the prize, posters must be submitted before February 14 to E. F. Knight '26, in the Dorms Not more than three colors should be used, and two is preferable. The prize this year is a stag ticket to the Prom which may be exchanged for a couple ticket on payment of the difference in

# Artificial Lightning Discharges Of Fifteen Feet Shown in Movies

lightning discharges were described by F. W. Peek, Jr., at the meeting of the Technology branch of the A. I. E last night. The talk was illustrated by moving pictures.

Mr. Peek is an internationally known authority on high voltage engineering, being the author of several books and of many articles in the technical press on the subject. He is a graduate o Stanford University and Union Col

One of his best known works is the 'Law of Corona," published in the Transactions of the A. I. E. E. for shown. Torque curves with distortions It represents loss which increases with

> protection against it. He explained the method of determining the voltage of lightning strokes and stated that according to estimates made in this manner the voltages were of the order of

Twelve and fifteen foot artificia ing fronts and some are oscillatory. The stated that whether the discharge took the form of a single impulse or an oscillation was determined by the resistance of the path from cloud to earth.

Lightning constitutes one of the greatest menaces to power transmission. The chief way of protecting high voltage lines from lightning is by the use of the "ground wire" which is simply a wire placed near the line and connected to ground. The theory is that the lightning will strike the ground wire more readily than the power line. Mr. Peck showed how tests on ground wires were carried on in the laboratory with the aid of artificial lightning discharges of some twelve or fifteen feet in length. A model transmission line equipped with ground wires is put up and a model cloud placed above it. The lightning strokes are made to pass from the model cloud to the ground wire or to the transmission line when the line is not protected by a ground wire.

Movies were shown of the artificial lightning in action. A model village was set up and lightning was made to ner the voltages were of the order of strike some of the buildings. The ef-100,000,000 volts. As to the nature of fect of lightning rods was shown in the discharge he said that "for the most this connection. Views were also shown will be given by Dr. S. Dushman on Part lightning discharges are impulses of lightning striking bits of wood. "Recent aspects of Bohr's Theory" on February 17 and 18.

part lightning discharges are impulses of lightning striking bits of wood, while a flask of water was demolished some discharges are impulses of slant at a single stroke.

# TOMORROW FINAL DAY OF SIGN-UP CAMPAIGN

Technique has sold 1100 signups so far in its campaign for subscriptions to the year book. Today and tomorrow the year book. only remain for Technology students to procure a signup and make sure that they will have a copy of Technique when the book comes out during Junior

Signups are being sold this year for one dollar, redeemable during March for an additional \$2.50. The sale stops at o'clock tomorrow afternoon, after which time the cost of a signup be-comes two dollars and the total cost of the book \$4.50.

Only a very few more books are being printed than are ordered by the end of this week, and it is possible that those who wait till later to buy the book will be disappointed even though they are willing to pay the two dollar signup charge that will be in force after tomorrow afternoon.

# **GREAT PAINS ARE** TAKEN TO SECURE **FAMOUS AERONAUT**

Lieutenant Arnold, Mechanic And Flight Assistant Also Expected

Lieutenant Leigh Wade, pilot of the Boston I during the world flight, has been secured by the Acronautical Engineering Society to speak today in room 10-250 at three o'clock. It is possible that Lieutenant Leslie Arnold will also be present.
Lieutenant Wade flew the Boston I

until it was disabled by a storm, finishing the flight with the Boston II. Lieutenant Arnold was mechanic and assistant pilot on the plane of Lieutenant L. H. Smith. Both officers have recently received a promotion of five hundred names on the lists by a special act of Congress.

The story of the world fliers is well known. Four planes started from the West Coast, flying first up to Alaska. There one of the planes, that belonging to the commander of the expedition, disappeared, and was located a few days later disabled and unable to proceeded across the Pacific, over the deserts of Asia, and across Europe. Shortly after taking off for the flight across the Atlantic, the Boston I was forced down, and was wrecked when a derrick tried to raise it. Lieutenant Wade rejoined the others with a new plane on this side of the ocean, and finished the flight across the continent with

(Continued on Page 4)

## GLEE CLUB SENDS OUT CALL FOR NEW VOICES

More Tenors Needed To Balance Organization Is Opinion Of Coach Weston

According to Coach Weston of the Combined Musical Clubs' Glee Club, The signup campaign for Prom tick-ets will begin on March 2. From 12 needed in order to assure a well balrequesting that all men who are able to carry a tenor part or who are in any way interested in trying out for such a position with the Glee Club.

It seems that all along there has been a tendency toward too little weight on the tenor end of the club, due, of course to the natural scarcity of that type of voice. There are many men who are able to carry both tenor and bass parts providing that the range of the songs is neither too high nor too low. It is upon these baritones that the club has been relying and in its call for men to take tenor parts, hopes to attract several baritones as well as tenors.

The Technology Alumni Club of Fall River, Mass., is sponsoring the concert which the Combined Clubs are giving in Fall River this evening. It is becoming a custom for the clubs to make an annual visit to the Fall River Club. As usual the men on the clubs expect to reach their destination in time to have dinner at the homes of several of the alumni and of other prominent persons in Fall River.

Following the performance a bus will icave for Boston, but the men have been invited to remain for the dance, which follows the concert and lasts till one o'clock, and to spend the night in Fall River. The proceeds of the concert will be given to charity.

# **CALENDAR**

Friday, February 6
3:00—Automotive Engineering Society meeting,
room 10-267,
7:30—Tech Show rehearsal in north hall,
3:00—Aero Society, room 10-250,
5:00—Catholic Club board of directors, room
2-151,
8:00—Cosmonolites Club

2-151.

8:00-Cosmopoliton Club, north hall, Walker,
8:30-Dorm dance, Walker.
Saturday, February 7

11:00-Chemical Warfare Unit, room 3-305.
Thursday, February 12
8:00-Sophomore hop, Walker,

A Record of Continuous News Service for 43 Years



Official News Organ of the Undergratuates of Technology

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## DARLING NINNIES—DELICATE LORD FAUNTLEROYS

#### Some Comments Upon the Classes of 1927 and 1928

PASKING in a sort of self-satisfied conscious cuteness, lethargic and insipidly white collared, many (or should it be "a majority") of the classes of 1927 and 1928 are standing by and allowing the two upper classes to carry the burden of Institute activities. It is a deplorably unprecedented situation. Since memory runneth no two classes have exhibited such an utter lack of spirit, such a dearth of active men, such a rotten, unspirited deadness.

This charge is direct, specific, and unequivocable. Lucifer in the guise of laziness and insouciance is guiding the existence of these men; or else they are bowing down in unheard of numbers to worship the Great Brown Bag. The latter is not to be believed. It is not true. The trouble is that the two classes have not awakened, have not become aware of the fact that it is they that must carry on, upon their endeavor rests the future of the various activities.

Men in classes gone by have builded well, and it is not proposed to allow their handiwork to be relegated to the limbo of failure. The classes of 1927 and 1928 must be prodded, nay, dynamited,, until they show a spirit of activity sufficient for the requirements of the undergraduate system.

It is not believed that the classes lack the latent power. They do not. They have simply become lost in the black, dumb, darkness of the vortex. They have become swallowed in the mire of self-satisfaction. The realization of a social and communal duty has not dawned upon them. This is written with the hope that it might bring them out of their trance for their own good and for the salvation of Institute activities. Surely they can rise to the occasion, adopt a progressive, aggressive attitude; amend their ways so that as individuals they can add increments to make a real, live student body composite. How many of them will come out for activities?

We are glad that the Institute authorities are keeping in touch with lecture room conditions. The Superintendent of Buildings and Power seems to be doing everything in his power to keep things of the Opera. Turning to his neighbor, in shape, and it is apparently the fault of thoughtless vandals that he remarked in a hoarse whisper "THE the temperature is not what it should be.

# THE PROGRESS OF TRACK

TT is gratifying to note that work at the track house is progress-I ing with more vigor than it has in the past several years. Approximately 100 men are practicing regularly, and with the new board track and two coaches, prospects are exceedingly bright. It is a highly agreeably viewpoint to consider this new vitality as indicative of an increased interest in things athletic at the Institute.

Track is historically and numerically the most important sport at Technology, and in general is a good barometer of general athletic conditions. Its position is due to its inherent quality of offering an unexcelled physical training coupled with a fascinating diversion. It gives the competitive instinct its best chance for expression, and, of course, along with other forms of sport fulfills the indispensable function of a social meeting ground.

The growth in track is accelerative, and the greater it is booming, the more men it needs. The track house is open to many new men, and the coaches are most desirous that they come out. Every man gets personal attention even if he only goes out for the exercise—that is the principle behind the coaching system. It is not a question of developing a winning track team—a juggernaut to crush all opposition. The real spirit that should impell men to try track is the necessity for physical training, and with the men taking that viewpoint the coaches have a splendid opportunity to show their wares. Track is a sport worthy of the consideration of all men choosing a sport.

# TO ARMS, YE COMMITTEE

T is again deemed necessary to urge that the idea of the circus Let be carried to a successful culmination. There seems to be a degree of don't care spirit and a lack of interest; a condition that is not to be excused simply because the armory was not obtainable.

Tech night was dispensed with with a great deal of holy vigor, but something of the same sort of a thoroughly admirable nature finds but little enthusiasm for its support. It is essential for the general esprit-de-corps that these ensembles of a free and merry nature be held at intervals. They pull us out of a monotonous rut, they foster sociability, they bespeak a degree of vigor and life in the Institute community. The shades of Ye Old Courtenyte flicker with a fascinating plea that more jousts or merriments be held. To arms Ye Committee.



One of our professors has announced that to wear one's galoshes unbuckled should be rated as conduct unbecoming an Engineer. He admits that a Harvard man might wear them open and floppy, but that it is quite unfitting for a technical man to let his lazy instincts come to the fore. It is, then, an admission of slothfulness to neglect to do up one's artics in tramping from class to class! The Lounger exhorts his readers to be exceedingly careful in the future to spare this prof the pain resulting from seeing engineers so lazy and undignified as to let their galoshes flop open, waving in the breezes.

A friend of the Lounger's advised him to refrain from eating raw oysters. He explained that they had been found poisonous in many instances, and that several cities were carrying out campaigns against them. As soon as most people learn of this, there will be a rush for the succulent bivalves, as humans crave that which is bad for them. If the authorities go so far as to pro-hibit the use of the aforementioned shell fish, the Lounger is willing to bet that they will soon become as popular as moonshine! Just because the "jumpsteady" variety of liquor is hard to obtain, it is much in demand. Why, therefore, are we not liable to have oyster bootleggers?

The Lounger, fearing lest his engin-eering training would destroy his ear (such as it is) for music went to the Opera the other evening. Seldom has he seen a more unmusical audience. They kept talking all through the prelude d'orchestre, and did not seem to know just what it was all about. However, since most of them were there to see and be seen, it made little difference to the vast majority. It seems a shame, though, that those who really want to hear the music should be annoyed. The Lounger hopes that when Technology men go to the Opera, they will be sufficiently thoughtful and considerate of other people's feelings to calm down on the talking when things get under way.

The Lounger heard a couple of his friends grousing around the corridors after a Triple E class, wishing that the next quiz might have a question on electricity. According to them, the recent tests have been on math, physics, and about everything but geology and biology. A sad state of affairs if they are correct. The Lounger thanks his lucky stars that he is through with

To return, for the moment to the finer things of life, the Lounger would like to tell his friends about a little conversation he overheard in 10-250 A chap was looking over the Play Directory, trying to make the leaden minutes fly by, and came across the notice TECH's getting high-brow, ain't it, printing all about 'Thais.' Who wrote it anyhow Mendelejeff." The wellrounded out engineer certainly knows a lot! The Lounger expects to hear some one ask what musical comedy Isaac Newton wrote. They will be telling us that Columbus stages the Follies, and that Florenz Ziegfield discovered America. What next?

# Play Directory

BOSTON OPERA HOUSE: Chicago Opera Company. Tonight: "Barber of Seville. Saturday Matinee: "Pelleas and Melisande." Saturday evening: "Jewels of the Madonna." COLONIAL: Ziegfeld Follies. Just as popu

COPLEY: "Thee Live Ghosts." Crooks and HOLLIS: "Meet the Wife."

PLYMOUTH: "Grounds for Divorce." Spark ling comedy with serious undercurrent, MAJESTIC: Dark.

NEW PARK: "New Brooms." Comedy that is not at all bad.

ST. JAMES: "In the Next Room." Hackneyed mystery play.

SELWYN: "White Cargo." African monotony dramatized. SHUBERT: Greenwich Village Follies. The usual run of funny hokum TREMONT: "Be Yourself." Musical, "danci-

WILBUR: "The Dark Angel." Appealing war



# **Communications**

To the Editor of THE TECH:-May I express my appreciation of your editorial in your issue of January 30 relating to smoking in the education buildings? The end to be sought is, as you state, a sort of "gentlemen's agreement" that we will all play the game together in the interests of orderliness. It should be noted that smoking in the halls whether done by instructors or students does not violate any "rule" or disobey any "order" but it does deny a request made by our central representative student body (the Institute Committee) on the part of the students, and the Executive Committee (of the Corporation) on the part of the Institute auth-orities. This joint "request" has been posted on our walls since November 1921 and was originally conceived in the spirit of your editorial and of this letter. As often happens in such cases, the signs have become so familiar as to lose much of their original emphasis. It is also true, as you say, that to some of us of the instructing staff they have apparently ceased to act as reminders. I hope and be-lieve, however, now that it is again emphasized that it is not a curtailment of personal pleasure which is sought, that the good sense and loyalty which is so strong in all Tech men will lead to voluntary limitations which will be sufficient to attain the desired end. H. P. Talbot,

The Editor of THE TECH Walker Memorial Dear Sir:

As Superintendent of Buildings and Power, and therefore the general housekeeper of the Institute, I appreciate the many useful hints received through your publication, THE TECH.

You were right in stating that the air in 10-250 is supposed to be changed every seven minutes and I am right in stating now that it is changed every seven minutes. The question of foul air has never arisen in 10-250 or any other part of the Institute.

In the old Institute a subdivision of the Chemistry Department did test air as part of the regular class work, not to keep track of the heating and ven-

Continued on Page 4

# Church Directory

FIRST BAPTIST CHURCH-Cor. Common weath Ave. and Clarendon Sts., Boston Sun., Feb. 8.

10:30 A.M.-Morning service. Sermon by Rev. Austen K. deBlois, Ph.D. 12:00-12:45 - Students' discussion group Subject "The Race Problem." 7:30 P.M.-Students' social group. Speaker,

Mr. Dewey Short, of Harvard Law School. All students invited irrespective of religious FIRST PRESBYTERIAN CHURCH—Colum

bus Ave. & Berkeley Sts., Boston. Sun., Feb. 8. 10:30 A.M.-Morning worship. Sermon by

Rev. A. A. Riddout. 12:00 M .- Students' Discussion Class. 6:00 P.M.—Supper for young people in the

(Continued on Page 4)

#### FOR SALE

Maxwell Roadster, 1922 modelnew pistons, new tires, rebuilt battery. In good condition. Price: \$300. Phone, Univ. 4272-M or call A-202 Tech Dorms.

FOR LUNCHEON COME TO

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Golf Suits ......33.50 to 70.00 Biscuit Flannel Knickers and Trousers...... Corduroy Jacket and Knickers .....

Jordan Marsh Company **BOSTON** 

# Oarsmen Are Invited To Row At Poughkeepsie RELAY RUNS IN K. OF C. MEET TOMORROW

# Rowing Association Sends Invitation To Tech Crew To Row In Famous Regatta Wiebe, Miller and Shiepe to

Just how much of an impression that victory over Cornell last spring, and the subsequent entry into the Olympic tryouts, made on the rowing world was brought to mind when Manager Guy Frisbie received an invitation from Maxwell Stevenson, Chairman of the Intercollegiate Rowing Association for the crew to row in the famous Poughkeepsie regatta next June. That famous crew of Bill Haines which he whipped into shape in so short a time definitely placed Technology in the rowing limelight, for only crews of outstanding reputation receive invitations from the Association to row in the big annual regatta.

SWIM THE ORANGE

For Upstate College-

Swim Tomorrow

WALWORTH UNABLE TO GO

This week-end will find the Beaver

mermen engaging the Syracuse swim-

mers at Syracuse. The Institute swim-

to his illness, the same team will meet

the Orange delegation as has been

swimming during the rest of the season,

Kerns will be the only entry in the

breast stroke, and should be able to

hold his own against the strokers of the

Syracuse team. This is Walworth's pet event, but as both he and Kerns are

practically evenly matched, his loss will

not be felt here as much as in the hundred. There will have to, however,

be a shift to fill his loss in the hundred

yard swim, as Walworth and Wies

were the two men entered in this event.

Parsons, who has been swimming on

ing entry as he has been swimming

this event all season, and is used to

Dives Are Strong

ing through.

The dash is almost certain to go to

Syracuse will have to have a better ver than the average in order to

giver than the average in order to

coming through in this event all year. Against an excellent Yale man, he

barely missed first place, and has won

firsts in the remainder of the meets.

At present, he and Armstrong are tied

for the most points scored this year; so both men will put forth their best efforts, not only to win, but to keep ahead in the total points scored. Armstrong has the advantage in this respect

as he swims on the relay, which helps add to his total credit, if they win.

Frosh Meet Exeter The relay will probably be composed of the same men that have competed in

the earlier meets of the season: Johnson, Himrod, Parsons, and Armstrong. Though each man is capable

of some fine times in the 50 yard dash,

the former Technology record consist-

and defeated them without trouble. The frosh met Malden in their first

two teams and it is not in favor of the

frosh by any means.

walk-away with the dives. Woods, the leading Technology entry, has been

IN SYRACUSE POOI

Every year the cream of the crews all over the country travel to Pough-keepsie to enter the annual regetta held **ENGINEER DIVERS** The regular entrants include Cornell, Columbia, Pennsylvania, and Syracuse, the other competitors for honors racing only as a result of an invitation from the Intercollegiate Rowing Association. Last year Washington and Beaver Tankmen Leave Tonight Wisconsin were the two crews from the West that entered, the former eight easily winning, while the Badgers surprised the rowing world by finishing second.

This year Washington and Wisconsin have again been invited, and also the Navy and Technology. California has also been asked to come, but it has been decided that Washington and California will race first, the winner of the race being the one to come East. With these fast and powerful eights entered into such an enormous regatta, the Beaver oarsmen may feel quite honored to get such an invitation. Due to the date and the expense of the affair the Athletic Association is forced to send in a declination. This year the date has been set for Monday, June 22, which is too late for the crew to remain over.

#### More Men are Needed

Although not quite so large, but yet quite as important, is the four sided race which is to be held on the Charles River. At Poughkeepsie, there are usually six crews entered, while this race between Technology, Pennsylvania, Cornell, and Harvard includes only four. The race for the supremacy of the Charles will not be so well known to outsiders, but to Technology a good showing is absolutely essential. Rowing has now gained prestige, and to retain this standing the Cardinal and Gray shells must be seen ahead of all the others in the races this Spring. The fact that an invitation was received to enter the Poughkeepsie races proves that in the eyes of rowing enthusiasts, Technology is ever improving, and now worthy of entering real races, with real op-

As a result of Bill Haines' talks in the Military Science lectures, many men responded. Still not enough, however. It is now getting very late in the season, but not yet too late. Today marks the middle of the second term, so there is still a half a term left in which men may go out to the boathouse and learn the fundamentals of rowing before going out on the water next term. It is evident that the interest has increased exceedingly in the sport, since last year. This time last year the call for men had not gone out and the small number of 30 were then reporting for practice. At the present time, there are over 120 men out including freshmen. This shows a great increase in numbers, but not nearly

# FENCERS LEAVE FOR ANNAPOLIS

Second Place Goes to Ferre In National Junior Fencing Meet

Tonight the Tech fencing team en- the Army. The backstroke will be well trains for Annapolis where they cross taken care of by Johnson, who is imswords with the strong navy team to-proving every day. At the beginning morrow. Profiting from their mistakes of the season he was doing the 100 in of last Saturday when the Harvard about 1 minute, 25 seconds. Every grads defeated them, they are full of meet has found his time cut by a fracconfidence and hope to take the mid- tion of a second, until now he can break

Since this is the first formal meet of ently the year, that of last week being a practice encounter, Capt. Levis and his swordsmen have no intentions of tasting the cup of defeat. Headed by Capt. Andover, and this week's assignment Levis the remainder of the foils team is just as hard. They probably will not will be Ken Hawthorne, George Elkins, and Roland Seabury. Capt. Levis is expected to repeat his victory of last week so that if the rest of the team

Last week Exeter met Malden High, week so that if the rest of the team comes through, a Technology victory is

On the eve of the meet comes the meet of the season and just managed news that one of Coach Danguy's star to win the meet by a close margin. epee men, Charley Blake, will be un-able to accompany the team but his ing the comparative strengths of the

Continued on Page 4.

# **BATON PASSERS** RACE BROWN ON **MECHANIC TRACK**

Run In Special 40 Yard Event

#### **BAILEY ENTERED IN 600**

Saturday night the mile relay team has a chance to redeem its two defeats at the heels of the Harvard flyers when they meet the strong Brown quartet over the Mechanics Hall track. These games, though not attracting Joie Ray or Nurmi, will bring together some of the best intercollegiate tracksters of the

Jack Weibe, Spud Miller and Shiepe are entered in the special 40 yard dash, and from the looks of the competition, the engineer flyers will need a lot of speed to break into the score column. There is Frank Hussey, the ex-Stuyvesant High School marvel and a member of the Olympic team to take on all comers in his specialty. Hussey has just entered Boston College at the midyear as a freshman, so Boston is assured of some fast Intercollegiate

sprinting for the next four years.

Frosh Sprinters are Fast
Al Miller, the flying Soph at Harvard and Joe Sullivan of Boston College who finished second and third to Loren Murchison last week-end at the B. A. A. games will also be in the ranks mers will be without their captain, as of the starters. They alone assure fast Bill Walworth is laid up, and will not time for the distance and a number be able to swim in the meet. With a of school boy stars bring the entries few slight changes in the lineup, due up little short of top notch calibre.

It will be interesting to see how Os Hedlund's frosh dashmen: Spud Miller and Shiepe fare in the meet. Both of them are going strong for freshmen and Os in the last few days has put them through their set of tricks every afternoon with a will. These men show great promise and if they prove sound in keen competition, the sport will have this reliable sprinters to take care of the shorter distances.

Bailey to Run in 600
Because of Doug Jeppe's condition Os has shifted Kauzmann on the mile relay team to take his place. Capt the relay, will probably be substituted George Leness, Howlett and Glen Bate-in this event. Weis should be the lead-man will make up the rest of the baton man will make up the rest of the baton passing squad. This squad has been working hard all week with Os putting with a very pretty spurt in the closing lost yards by juggling the stick on their

Arnold Bailey is entered in the spe-Armstrong who has won this event in good work of last Saturday when he the last three meets of the season. The came in third in the 1000 yard handibe up against าสก สายก. some last meets, but Armstrong should be signment to fill on the track of Mechable to hold his own, as he has never anics Hall.

# Matmen Tackle Army Saturday At West Point

West Point is due to be invaded by two Technology teams tomorrow when the cadets will play hosts to the engineer wrestling and boxing teams Both teams have shown steady improvement since the beginning of the season and the fireworks should scintillate over the Palisades on the Hudson. Both teams are determined to bring back a win and it will take some mighty good fighting on the part of the soldiers to prevent triumphs by Technology.

The same wrestling team that decisively trounced Tufts will again don togs for the engineers. This team finally seems to have struck its stride and the strongest possible combination is now in the lineup. The team has had two wins and two losses and is making a strong attempt to keep the number of wins greater than the number of

#### Greer Going Strong

Of the wrestling men the one with the best record so far is Coyle. Coyle has been on the wrestling team for two years now and is putting up a better brand of work than ever before. So far this year he had two falls and two decisions and it will take about the best man in intercollegiate wrestling circles to stop him.

In the 145 pound class, Cohon is making a name for himself. Forced off the team last year from injuries, Cohon is making a comeback this year and bids fair to repeat his record he made in sophomore year of only one loss and that due to a fluke. The only bout Cohon lost this year was due to his having taken off too much weight in an endeavor to wrestle. Cohon put up a hard scrap but he did not have the necessary strength.

Greer in the 158 pound class is regarded as almost a sure winner. He is experienced and should be a hard man to get down. In the heavier classes Tryon and Burke are both doing fine work. Both are full of scrap and hard men to throw. Although Burke is a 175 pounder he has to wrestle heavyweights since there is no one else for

the job.

The boxing team should turn in a win if they continue to show the im-provement they manifested in the Durham meet. Pierce should come through with another win. Last Saturday he the longer distance. He won the 100 special attention on the art of baton knocked his man out and he should yard in the Boston University meet, passing. In every race the team has give his next opponent a trouncing. Flynn is another man that looks prom-

Both Captain Kuhn and Trask are cial 600 yard run and if he holds up his boxing in classes in which they are outweighed by about twenty pounds. The reason is that no heavy sophomores and fer better time than was made in these fast competition, and has a tough as- at two in the Hangar and the freshmen age to do it, and it is the kind of cour age that is seldom displayed.

#### FRATERNITY BASKETBALL

The results:

Delta Kappa Epsilon defeated Delta Tau Delta 12-10; Lambda Chi Alpha defeated Phi Sigma Kappa 12-11; Phi Gamma Delta defeated Theta Xi by default; Theta Chi defeated Lambda Phi



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# Hinrod will be the other entry in the 50 yard and has a good chance of com-ANNUAL FEBRUARY SALE

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#### WORLD FLIER SPEAKS TO AERONAUTS TODAY

(Continued from Page 1)

At every stop during the flight the aviators were enthusiastically received. Since their return to this country, they have been kept busy writing memoirs social affairs, and making speeches.

The Aeronautical Society wired several times to the home of Lieutenant Wade, but he has traveled a good deal during his leave of absence so that it was not until the day before yesterday that it was known that he would be here. On his arrival in town, the manager of the Society, G. G. Davidson, called him up and was told that he would be glad to speak before the students of the Institute. The time was planned in order to be convenient to the greatest number, and the meeting will therefore be held from three to four today in room 10-250. This is the usual time for the Aldred

#### CHURCH DIRECTORY

(Continued from Page 2)

6:30 P.M.-Young peoples' meeting. 7:30 P.M.—Evening worship. Sermon by Rev. M. S. Bush, Presbyterian Student Pastor.

MOUNT VERNON CHURCH-Beacon St. &c Mass. Ave., Boston.

Sun., Feb. 8. 11:00 A.M.-Morning worship. INTER-RACIAL Sunday. Mr. Lovett will conduct the service. Rabbi Samuel Wolk of the Temple Israel will preach.

12:30 P.M.-Bible Study Group led by the minister.

7:30 P.M.-Young Peoples' Society meeting. Speaker, Miss Constance Didly, head worker of the Robert Gould Shaw House. Subject, "Some Aspects of the Negro Ques-

PROSPECT ST. CONGREGATION CHURCH -Two block from Central Sq., Cambridge.

Sun., Feb. 8. 10:30 A.M.-Service of worship. Sermon by Mr. Menair. Subject. "Life's Choice." Choosing a course of conduct-a wife-an occupation-ideals and friendships.

12:00 M.-Young men's class. 6:15 P.M.-Young peoples' meeting. 7:30 P.M .- Evening worship. Sermon subject, "What Happens to the Upright Man?"

TEMPLE ISRAEL-Commonwealth Ave. at Blandford St., Boston. Sat., Feb. 7-10:30 A.M.-Rabbi Levi, "The

Hand of God." Sun., Feb. 8-11:00 .M.-Speaker, Dr. Julian Morgenstern.

Mon., Feb. 9-8:00 P.M.-Booklovers, "A Springtide in Palestine." Sara Smith, speaker.

Tues., Feb. 10-8:00 P.M.-College Club. Speaker, Prof. David G. Lyon, Wed., Feb. 11-8:00 P.M.-Brotherhood.

Speaker, Alden G. Alley.
Thurs., Feb. 12-8:00 P.M.—Study Group, "The Religion of the Jew."

TRINITY CHURCH. Boston. Sun., Feb. 8.

10:00 A.M.-Classes for Young People. 11:00 A.M.-Morning Prayer and Sermon by Rev. Malcolm Taylor. 4:00 P.M.-Evening Prayer and address by

Rev. George C. Gibbs. 5:30 P.M.—Young People's Fellowship—Discussion. Leader, Rev. Malcolm Taylor. 7:30 P.M.-Evening Service and Address by Rev. John Ridout.

#### WALKER AGAIN SOUGHT AS PLACE FOR CIRCUS

Expect Consent If Decorations Can Be Properly Protected

After a slight reorganization the Circus Committee, with H. C. Hoar '25 as the new chairman, will meet this afof their trip, attending banquets and ternoon to reach a final decision regarding the fate of the Technology Circus originally scheduled for February 27. Hoar expressed himself as of the opinion that there would be a circus but as to where it would be held or when he could not say.

The Circus Committee has about reached the decision that if a circus is to be held it will be held on the upper floor of Walker Memorial with the big ring in the dining hall if permission can be obtained after taking sufficient care to protect the new decorations.

It has also been suggested to them, according to Hoar, that the circus be held a week later on March 6 or postponed until the beginning of the following term on account of the short time left to the original date chosen.

The present committee is composed of H. C. Hoar, Chairman; Austin Cole, Jr., Harrison Browning, A. G. Hall and C. L. Petze, all being Seniors appointed by G. L. Bateman '25, President of the lattice of Institute Committee. Cole was the original chairman but had to resign because of other activities.

### ROGERS AND DENISON TALK AT NEW BEDFORD

Celebrating its twentieth anniversary, the Technology Club of New Bedford is holding a dinner tonight at the Wansutta Club at New Bedford. Professor R. E. Rogers of the Department of English and History and O. B. Denison 11, Secretary-Treasurer of the Alumni Association will attend.

Mr. Denison has been active in organizing Technology Clubs and has made many trips for the purpose of visiting the various Technology clubs and organizing new clubs. .

#### HALF OF SENIORS HAVE JOBS BY SPRING RECESS

(Continued from Page 1)

thoroughly master the subject, but don't be the type of man who asks, 'Professor, how much must I know to get by?' Any student of average abilican handle the work if he will put the required eight hours a day."

"I have been asked which course offers the best chance for getting a job on graduation. There is little difference between the larger courses, I, II, III, VI, X and XV. Those courses which train men for a specific line of work depend on the condition of busing the grant of the commission. The same thing had here ness. In general, fifty per cent of the graduating class will have received of pened in 5-130, but in addition they had fers before Junior week. Last year in broken the glass and torn the cover some departments there were thre times as many jobs as there were men.

"I am almost never asked as to a man's standing in his studies, but frequently asked if the man under consideration was prominent in any stu dent activities; if he was found to be a good mixer; if his classmates thought that sort there. well of him. They reason that the man I bespeak your good offices to strong-who was popular with his class will be ly point out that tampering with therable to get along well with men."

#### KETTERING SPEAKS TO SENIORS ON RESEARCH

(Continued from Page 1)

trouble with such a method of attack is that the men are inclined to believe everything they read, leading to further complications if the statements recorded by others are wrong. It is far better to analyze the situation first, in Dr. Kettering's opinion, because in research work one must learn to question everything, and not depend too much on the theories of other investigators.

The speaker discussed in some detail the 'divisibility of matter," and ex-plained that the only factors which were responsible for faulty machinery are: inertia, elasticity, and resistance. These factors are the only "diseases to which machinery is susceptible." A technical subject Dr. Kettering defined as being one which is "not understood, but very good to get appropriations for." "A thing is scientific," he continued, "when it is understood by only

Following a brief description of the working of the internal combustion engine, the speaker emphasized the fact that present research workers are not Danguy in the training of his men. interested in the cost of gasoline per gallon, but rather the cost of the fuel per mile, that is, the energy which it is possible to obtain per unit. The man who is doing research work does not care how many times he must repeat his work because of failures, but keeps on hoping he won't fail the last time.

"Work enthusiastically, and keep on hoping," was Dr. Kettering's advice in concluding his talk.

#### COMMUNICATIONS

Continued from Page 2

tilating end of it but to get informa-tion useful to them in their work. As far as I know, this is done now, although I have never had a report from any instructor that the air was foul in any room in the Institute.

This Department very frequently makes tests with an anemometer and notes the velocity of the air entering the rooms.

The question of overheating 10-250 has been called to my attention for the first time this last fall. Investigation disclosed the fact that the thermostat in the room had been tampered with. In further illustrating this point, on Saturday afternoon the monthly inspection of Building 1 and 5 was made and rooms 1-271 and 1-281 were found

of the thermostat from the wall. This happens, more or less all over the Institute and hardly a week goes by without two or three such cases reported. Up to this year 10-250 has not been treated in that manner, but re-cently we had two or three cases of

mostats affects the comfort of the Technology populati

Very truly yours, Albert S. Smith, Supt. of Buildings and Power.

#### FENCERS LEAVE TO MEET MIDSHIPMEN

Continued from Page 3

place will be ably taken care of by Joe Levis. The other man on the epees

will be Sam Cole. Luis Ferre a member of last year's fencing outfit and now a graduate stu-dent at the Institute participated Tuesday in the National Junior Fencing Tournament where he won second best honors. This tournament is conducted annually at New York and the best fencers of the United States compete for the first prize.

Members of the Olympic team are the only fencers who are ineligible to compete in this tournament. The winner is given permission to compete in the national tournament, from which the Olympic team is selected. There are only seven or eight men who may participate in the National tournament. Ferre competed in 11 matches and won every one up until his last match with Bancoe, Captain of the Columbia fencers three years ago, 5-4. Bancoe by his defeat of Ferre was acknowledged the winner of the tournament. Although Ferre is ineligible to represent Technology in intercollegiate competition, nevertheless he does his bit for the cardinal and gray by aiding Coach

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# Notices and Announcements

## **OFFICIAL**

## CHEMICAL WARFARE UNIT

There will be a meeting of the members of the advanced Chemical Warfare Unit at 11 on Saturday, February 7, in Room 3-305. All members of Unit to be present.

# **UNDERGRADUATE**

#### 1927 CLASS OFFICERS AND COMMITTEE

Important meeting in Room 1-151 at 5.15 o'clock today to discuss dance de-



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# WANDERING GREEKS

Wandering Greeks, please make your presence at the Institute known by signing the book placed in the mair lobby near the Cashier's Office if you have not already done so.

SOPHOMORE HOP

The sophomore class will hold a formal dance the evening of February 12, in Walker. Bert Lowe's orchestra will furnish the music.

> WALKER MEMORIAL COMMITTEE

Competition for freshman members will start Monday February 9. Report at the Committee office Monday, between 12 and 2.

WORLD FLIGHT
Aeronautical Engineering Society will be addresses by Lieutenant Leigh Wade, world flight flier, this afternoon at 3.00 in room 10-250. Students and faculty invited.

CATHOLIC CLUB Meeting of Board of Directors of Catholic Club today at 5 P.M. in room

# **BIBLE STUDY CLASSES**

All men desiring to attend T. C. A. discussion groups and who were not present at last week's classes will leave name at T. C. A., and a special class will be arranged.

COSMOPOLITAN CLUB

Cosmopolitan Club meeting today at 8.00 P. M. in North Hall, Walker. Movies and refreshments.

# THE **MASSACHUSETTS** INSTITUTE OF TECHOLOGY

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# **PUBLICATIONS**

Bulletins of General Information, Courses of Study, Summer Session, Advanced Study and Research; and the Report of the President and the Treasurer.

Any of the above named publications will be mailed free on application. Correspondence should be addressed to

Massachusetts Institute of Technology Cambridge 39, Mass.